

ABSTRACT

There is provided a size and a shape capable of decreasing an unit power consumption, an adsorption column having the optimal shape for the selected adsorbent, and a pressure swing adsorption separation apparatus having an excellent pressure swing adsorption separation performance. In the present invention, an adsorbent having an equivalent diameter within a range of $1.0 \pm 0.2\text{mm}$ or within a range from 12 mesh to 20 mesh is used and the adsorption column is established such that a superficial velocity u [m/s] of a raw material air is set to be within a range of $\pm 25\%$ of $u = 0.07a + 0.095$ to the equivalent diameter a [mm].

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